

**IN THE CLAIMS:**

1. (Withdrawn) A method for providing an individual with a biological factor or intermediate thereof which comprises introducing into said individual a therapeutically effective amount of Sertoli cells, said Sertoli cells genetically altered to produce said biological factor or intermediate thereof and wherein said Sertoli cells create an immunologically privileged site.
2. (Withdrawn) A method of treating a disease that results from a deficiency of a biological factor which comprises introducing into a subject in need of such treatment, a therapeutically effective amount of Sertoli cells, said Sertoli cells genetically altered to produce said biological factor or intermediate thereof and wherein said Sertoli cells create an immunologically privileged site.
3. (Withdrawn) The method of Claim 1 or 2 wherein said subject is a mammal.
4. (Withdrawn) The method of Claim 3 wherein said mammal is human.
5. (Withdrawn) The method of Claim 1 or 2 wherein said biological factor is a hormone.
6. (Withdrawn) The method of Claim 3 wherein said biological factor is a hormone.
7. (Withdrawn) The method of Claim 2 wherein said biological factor is insulin and said disease is diabetes mellitus.
8. (Withdrawn) The method of Claim 2 wherein said biological factor is Factor IX and said disease is hemophilia B.
9. (Withdrawn) The method of Claim 2 wherein said biological factor is B-UGT and said disease is Crigler-Najjar (CN) disease.

10. (Withdrawn) The method of Claim 1 or 2 wherein said introduction is by transplantation.
11. (Withdrawn) The method of Claim 1 or 2 wherein said Sertoli cells are introduced into said individual in a dosage ranging from  $10^5$  to  $10^{10}$  cells.
12. (Withdrawn) The method of Claim 10 wherein said transplantation is by xenograft.
13. (Withdrawn) The method of Claim 10 wherein said transplantation is by allograft.
14. (Withdrawn) A pharmaceutical composition comprising Sertoli cells genetically altered to produce a biological factor or intermediate thereof admixed with a pharmaceutically acceptable carrier.
15. (Withdrawn) The pharmaceutical composition of Claim 14 wherein said biological factor is a hormone.
16. (Withdrawn) A compartmentalized kit comprising a first container adapted to contain Sertoli cells genetically altered to produce a biological factor or intermediate thereof.
17. (Withdrawn) The compartmentalized kit of Claim 16 further comprising a second container adapted to contain a pharmaceutically acceptable carrier.

18-24. (Canceled)

25. (Currently amended) A An isolated Sertoli cell comprising a vector comprising, in the 5' to 3' direction, a promoter which functions in Sertoli cells, operatively linked to a coding sequence for a biological factor protein, wherein said Sertoli cell creates an immunologically privileged site *in vivo*.

26. (Currently amended) **A** An isolated Sertoli cell comprising a vector comprising in the 5' to 3' direction a promoter which functions in Sertoli cells operatively linked to a coding sequence for a biological ~~faetor~~ protein and a signal sequence coding for a signal peptide, said signal sequence located downstream from said promoter, wherein said Sertoli cell creates an immunologically privileged site *in vivo*.

27-28. (Canceled)

29. (Currently amended) **A** An isolated Sertoli cell comprising a vector comprising in the 5' to 3' direction a promoter which functions in Sertoli cells operatively linked to a coding sequence for a biological ~~faetor~~ protein wherein said coding sequence is the coding sequence for factor VIII and wherein said Sertoli cell creates an immunologically privileged site *in vivo*.

30. (Currently amended) **A** An isolated Sertoli cell comprising a vector comprising in the 5' to 3' direction a promoter which functions in Sertoli cells operatively linked to a coding sequence for a biological ~~faetor~~ protein wherein said coding sequence is the coding sequence for factor IX and wherein said Sertoli cell creates an immunologically privileged site *in vivo*.

31. (Currently amended) **A** An isolated Sertoli cell comprising a vector comprising in the 5' to 3' direction a promoter which functions in Sertoli cells operatively linked to a coding sequence for a biological ~~faetor~~ protein wherein said coding sequence is the coding sequence for bilirubin UDP-glucuronosyltransferase (B-UGT) and wherein said Sertoli cell creates an immunologically privileged site *in vivo*.

32. (Currently amended) **A** An isolated The Sertoli cell according to any one of claims 25-26 or 29-31, wherein said Sertoli cell is isolated from a non-human transgenic animal, and wherein said transgenic animal comprises said vector and expresses said biological ~~faetor~~ protein.